

REMARKS

Claims 1-8, 23, 24 and 28 are in the case, and the Applicant respectfully requests reconsideration of the claims. It is also believed that certain generic claims are also allowable; and consequently once they are determined to be allowable, the restricted claims 9-22, 25-27 and 29-32 should be reconsidered by the examiner.

The drawings were objected to by the examiner, and FIG. 4 has been corrected in accordance with the specification to change "224" to --302-- and also added --302--. Redlined and formal drawings are enclosed. In addition, various informalities of the specification have also been corrected in accordance with the examiner's suggestions.

The examiner also rejected claims 1-5, 7, 23, 24 and 28 as anticipated by US Patent No. 6, 208, 411 B1. The '411 patent is directed to a massively parallel inspection and imaging system which employs multiple focused beams to illuminate a specimen. The multiple laser beams are created from a single laser (101) using a computer designed diffracted optical element (102). The diffracted beams are transferred with a dichroic mirror (104) to a focusing element (105). Each of these diffracted beams are focused onto the sample (106). Light from the illuminated region of the sample then propagates back through the mirror (104) to be focused with the lens (107) onto an area detector (108). Note that the diffraction created beams in the '411 patent are all directed through, or reflected from, the same point centered on transmissive mirror (104) (see FIG. 1 and col. 4, line 59 et seq.). As a result, the diffracted beams arrive at different locations on the input plane of the focusing lens (105). Consequently, none of the diffracted beams can substantially fill the input aperture of the focusing lens and thus none can be brought to a diffraction limited focus.

By way of contrast amended independent claims 1, 23 and 28 include the feature of an optical component with a focusing lens having an input aperture and coupled with an optical arrangement which causes the plurality of laser beams to pass through a central region of the input aperture of the focusing lens (see FIGS. 2-4 at element 214 and see p. 12, lines 12-19 of the specification). Consequently, each of the plurality of laser beams is brought to a diffraction limited focus which enables far superior axial resolution over the '411 optical system. The off

center illumination of the input aperture in the '411 optical system also has additional unwanted effects. These detrimental effects include the clipping of the off-center laser beams by the focusing element's input aperture; therefore, the sample will be unevenly illuminated. These off-center beams will, in addition, be degraded by spherical aberration so that both lateral and axial resolution will suffer near the edges of the field of view. Again the claimed inventions set forth in independent claims 1, 23 and 28 avoid these problems by having an optical arrangement and method which optimizes the arrangement by causing the plurality of laser beams to pass through the central region of the input aperture of the focusing lens. Consequently, all of the claims are believed to be patentable over the '411 patent.

The examiner also rejected claims 6 and 8 as obvious over the '411 patent in view of Horikawa ('456). In view of the amendments to claim 1 and explanations provided, this rejection is also overcome.

In view of the above amendment and arguments, claims 1-8, 23, 24 and 28 are now in condition for allowance. Furthermore, since generic independent claims 1, 23 and 28 are now allowable, all pending claims 1-32 should be examined and are believed to be in condition for allowance.

The Examiner is invited to contact the undersigned, Michael D. Rechtin, by telephone at 312-832-4586 if a telephone interview would help to advance the prosecution of this application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or to credit any overpayment, to the Deposit Account No. 06-1450. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1450. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extension fees to Deposit Account No. 06-1450.

Respectfully submitted,

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